Habitat Restoration Team Adoption Date: November 6, 2002
CRMC Adoption Date: November 26, 2002

As directed by RIGL §46-23.1-5, the following is the state's Strategy for estuarine and coastal habitat restoration.

State Estuary and Coastal Habitat Restoration Strategy

The following is a strategy ratified and adopted by the Rhode Island Habitat Restoration Team (i.e. Technical Advisory Committee) pursuant to the Coastal and Estuary Habitat Restoration Program and Trust Fund. The Trust Fund mandates that a plan be established with "comprehensive public, agency, legislative and stakeholder participation." (RIGL § 46-23.1-5).

In so doing, the Habitat Restoration Team (comprised of public, agency, academic, legislative, and stakeholder participation) developed a plan that incorporates the following elements:

A. Description of Rhode Island's Coastal and Estuarine Habitats
  1. Seagrass
  2. Salt Marshes
  3. River Systems
B. Restoration Goals
C. Inventory of Coastal and Estuarine Projects
  1. Projects funded in FY03, FY04, and solicited in FY05
  2. Projected comprehensive budget
  3. Identification of funding sources
D. Criteria for Project Evaluation
E. Application Process
  1. Step 1: Pre-proposal
  2. Step 2: Final Application

According to the plan, habitat restoration grant monies are dispersed in accordance with RIGL § 46-23.1-5(2) which allocates funding for design, planning, construction or monitoring. Eligible applicants include cities and towns; any committee, board, or commission chartered by a city or town; nonprofit corporations; civic groups, educational institutions; and state agencies.

A. Description of Rhode Island's Coastal and Estuarine Habitat

Rhode Island is home to an array of coastal habitats, including salt marshes, seagrass beds, and river systems. These habitats support a wide variety of fish and wildlife,

contribute greatly to the state's biological integrity and diversity, and help support the state's economy: 75 million dollars in commercial fishery landings; a recreational fishery valued at 150 million dollars; and a tourism and outdoor recreation industry valued at two billion dollars on Narragansett Bay alone.

Despite their exceptional importance and value, Rhode Island's coastal habitats have suffered from several hundred years of human impacts – development activities that have destroyed or degraded many habitats. Salt marshes have been diked, ditched, and filled. More than 500 dams have been built on our rivers. Seagrass beds have succumbed to coastal development and declines in water quality.

In recent decades, technologies have emerged to restore productivity to degraded or destroyed coastal habitats. Scientists, engineers, and community groups have begun working with federal, state and local governments to restore salt marshes, re-establish seagrass beds, and restore fish passage to rivers.

1. Seagrass

Rhode Island's primary seagrass is eelgrass. Eelgrass provides many ecologically valuable functions. It produces organic material that becomes part of the marine food web; helps cycle nutrients; stabilizes marine sediments; and provides important habitat.

Many species of fish and wildlife depend on eelgrass. Eelgrass beds provide protection for bay scallops, quahogs, blue crabs and lobsters. Tautog and other fish lay their eggs on the surface of eelgrass leaves, and young starfish, snails, mussels, and other creatures attach themselves to the plant. Waterfowl such as brant feed on eelgrass. Studies in New England have documented the occurrence of 40 species of fish and 9 species of invertebrates in eelgrass beds.

As new growth replaces older eelgrass leaves, the dead leaves decay, becoming a valuable source of organic matter for microorganisms at the base of the food chain (NOAA Damage Assessment and Restoration Program, 2001). Eelgrass reduces shoreline erosion caused by storms and wave energetics thus protecting adjacent coastal properties. Eelgrass meadows can stabilize sediments and filter nutrients from the water column. Eelgrass also provides a unique habitat for recreational SCUBA divers and snorklers to explore (Chesapeake Bay Program, 2000).

2. Salt Marshes

Rhode Island salt marshes are found along the shores of salt ponds, the Narragansett Bay estuary, small embayments (such as Allin's Cove in Barrington), and estuarine rivers (such as the Narrow River estuary). Our salt marshes provide nursery grounds and foraging habitat for hundreds of species of fish, shellfish, birds, and mammals. Fish of all sizes, from mummichogs to striped bass, hunt in creeks and ponds. Quahogs and oysters live beneath the surface, while mussels, fiddler crabs, and snails occupy intertidal areas. Many kinds of birds visit the marsh to feed on the fish and invertebrates: osprey and herons, ducks of all sorts, and mosquito-eating sparrows that nest in the marsh. In

addition to their habitat value, salt marshes serve as natural pollution treatment systems by filtering out pollutants before they reach our coastal waters. The location of salt marshes between our developed coastal communities and the waters of the state also provides a buffer during storms and flooding.

Seventy-five percent of commercial fish species depend on estuaries for their primary habitat, spawning grounds, and nursery areas. In Rhode Island, the role that salt marshes play in our economy is evidenced by our 75 million dollar commercial fishery and a recreational fishery valued at 150 million dollars. The sweeping vistas afforded by the low lying salt marsh landscape contribute immeasurably to the beauty and serenity of Rhode Island's coastline, as well as our tourism and outdoor recreation industry, which is valued at 2 billion dollars on Narragansett Bay alone.

3. River Systems

Anadromous fish runs in Rhode Island occur in rivers, streams, and adjacent areas that drain into coastal ponds, Narragansett Bay, and Block Island Sound. These systems are used by migratory fish to feed and reproduce. River herring, Atlantic salmon, rainbow smelt, sturgeon, and American shad depend on passage upstream for survival. These anadromous fish spawn in fresh water, and mature and spend most of their lives in salt water. Conversely, American eels are catadromous fish, living in lakes and ponds as adults. They migrate downstream and eventually far out into the Atlantic, where they spawn and die in the Sargasso Sea. Their newly born young, less than an inch long, travel on ocean currents back to Rhode Island's rivers and streams.

Many of Rhode Island's rivers are blocked or obstructed by dams, weirs, tide gates, and other water-control structures. In addition to unobstructed passage through the water, migratory fish need healthy riparian areas whose vegetation provides cover, bank stabilization, and temperature regulation. Riparian vegetation also provides detritus (leaf litter, wood, etc.), which forms the base of the riverine food chain. Recreational and commercial fisheries benefit when river corridors remain healthy and passable to migratory fish (Save the Sound, Inc. 1998).

B. Restoration Goals

Habitat restoration is necessary for a variety of reasons. Habitat restoration is being used to reintroduce locally extirpated rare plant species and to create habitat for threatened and endangered wildlife. The restoration of wetlands and riparian areas is helping to reverse long-term trends in habitat loss, which has occurred over the last century. Numerous small and large-scale projects are underway to restore the natural hydrology, soils and vegetation to habitats around Rhode Island.

Some goals of restoration may include, but are not limited to:

- The re-establishment of habitat structure, be it chemical, biological, or physical. This may include reestablishing or maintaining hydrology, whether by reestablishing river or tidal flow, restoring flood regimes, or re-establishing topography;

- Control of exotic, non-native, or invasive species of plants or animals;
- Re-vegetation through native plantings or natural succession;
- Removal of dams or construction of fish ladders to provide passage for spawning or migrating fish; and
- Controlling, reducing, or eliminating other specific adverse impacts such as controlling polluted runoff.

B. Inventory of Coastal and Estuarine Projects

Projects funded in FY03

PROJECT NAME	PROJECT LOCATION	AMOUNT REQUESTED/ GRANTED	PROJECT TOTAL	OTHER FUNDING
1. Lonsdale Drive-In Wetlands Restoration Project	Lincoln, RI	$152,962.85	$2.7 million	65/35 match; $30,000+/- (Corp. Wetlands); DEM; US Fish & Wildlife
2. Explore the Bay/Field's Point Marsh Restoration Project	Providence, RI	$24,323.45	$408,658	NOAA Restore America's Estuaries: $96,814; NRCS: $61,000 (WHIP); grants: $215,572; and in-kind services: $10,272
3. Narragansett Bay Seagrass Restoration	Narragansett Bay	$29,096.45	$151,027 (STB transplants: $142,327 and G&T Environmental: $8,700)	NOAA: $59,318; Ida Ballou Littlefield Memorial Trust: $5,000; PADI Foundation: $1,370; and in-kind match: $54,866
4. Stillhouse Cove Salt Marsh Restoration Project	Cranston, RI	$7,323.45	$19,038	USDA/NRCS: $14,279(WHIP)
5. Palmer Avenue Salt Marsh Restoration Project	Warren, RI	$14,323.45	$40,000	USDA/NRCS: $10,050.75 (WHIP); RI Aquafund: $6,400
6. Mussachuck Creek Salt Marsh and Anadromous Fish Habitat Restoration*	Barrington, RI	$9,323.45	$100,000	80/20 fed match; NOAA (Fish America): $30,000; USDA/NRCS (WHIP): $65,000; and Save The Bay: grant management and monitoring
7. Napatree Dunes Restoration	Westerly, RI	$6,323.45	$7,000	Partner with Watch Hill Fire District
8. Habitat Restoration Issue (#6) of Narragansett Bay Journal	STATEWIDE	$6,323.45		

***self regulating tide gate only**

Projects funded in FY04			
Project Name	**Amt Requested**	**Matching Funds**	**Amt Granted**
Walker Farm Salt Marsh Restoration	$30,000	$183,900	$30,000
Factory Brook Fishway	$35,000	$85,500 (including inkind)	$35,000
RI Coastal Wetlands Inventory	$32,500	$97,500 (including inkind)	$14,725
Mapping Submerged Aquatic Vegetation in Narragansett Bay	$50,000	$57,603	$50,000
Kickemuit Reservior Fish Ladder	$50,000	$261,000	$40,187
Town Pond (Boyd's Marsh) Salt Marsh Restoration	$80,088	$3,405,912	$80,088

Projects funded in FY05

Project Name	Amount requested	Match	Total
1. Wakefield Fishway Slide Gate	$10,000	$17,000	$27,000
2. Gilbert Stuart Fish Barrier	$10,000	$13,000	$23,000
3. Rising Sun Mill Fish Passage	$37,500	$285,500	$346,075
4. Woonasquatucket River: Dyerville Dam	$32,000	$210,500	$242,500
5. Shannock Village Dams Fish Passage Project	$50,000	$59,298	$119,298
6. Pawtuxet River Anadromous Fish Restoration	$50,000	$107,750	$207,750
7. Little Mussachuck Creek Salt Marsh Restoration	$2,562	$23,363	$26,200
8. Rhode Island Wetlands Inventory	$17,775	$65,000	$130,000
9. NWR Invasive Species Control/Wetland Restoration	$20,000	$110,938	$178,438
10. Modifications to Low Ground Pressure Excavator	$10,603	none	$10,603
11. Continuing Support for the RI Habitat Restoration Portal	$9,560	none	$9,560

On-going list of projects (updated 12/2005)

PROJECT NAME	AMOUNT REQUESTED	PROJECT TOTAL	OTHER FUNDING
Omega Dam (Ten Mile River)	$100,000	1.5 million	150,000
Pawtuxet River Fish Run Restoration (permitting, engineering, and construction)	$25,000	150,000	35,000 NOAA/RAE: $25,000 for engin/design
Seagrass Restoration (aquaculture project)	$50,000	300,000	none secured
Gooseneck Cove (**design**/planning)	$50,000	750,000	
Wood/Pawcatuck River (feasibility study)	$50,000	100,000	none
Woonasquatucket River (feasibility study for fish ladders)	$54,350	79,350	
Narragansett Bay SAV Mapping (overflight and photo interpretation; implementing Global Monitoring Protocol)	$49,000	49,000	volunteers to do ground-truthing; lab space; NRCS funding for mapping
Cormorant Point, B.I. (expanding the culvert)	$15,000	40,000	25,000
Water quality and eelgrass restoration in salt ponds (phragmites removal and mosquito control); nitrogen barrier project—Nixon lab	$65,031	65,031	TBD
Phase III of Sachuest Point, Middletown	$40,000 (4 acre restoration); $500,000 (hydrologic analysis and excavation)		
Hamilton fishway on Annaquatucket River/Bissel Cove (slide gate for eels and river herring)	$15,000		No match
Bellville Pond (NK) (restoration plan and implementation)	$50,000		
Duck Cove (monitoring for 2 yrs)	$17,000		
Fishway at Factory Brook	$30,000		
Wetlands inventory of degraded or filled wetlands for future wetlands mitigation	$32,500	130,000	ACOE: $65,000

D. Criteria for Project Evaluation

Factors to be taken into account by the Technical Advisory Committee for the purposes of granting monies for estuary and coastal habitat restoration activities, determining the eligibility of an estuary and coastal habitat restoration projects for financial assistance, and in prioritizing the selection of estuary and coastal habitat restoration projects by the Technical Advisory Committee (Rhode Island Habitat Restoration Team) shall include, but need not be limited to:

(1) consistency with the state estuary and coastal habitat restoration strategy, the Narragansett Bay comprehensive conservation and management plan, the state coastal nonpoint pollution control plan, the coastal resources management program, the department of environmental management regulations, the anadromous fish restoration plan, and pertinent elements of the state guide plan;

(2) the proposed timeline of the project (projects slated to begin sooner rather than later will be given greater preference);

(3) the ability of the applicant to provide adequate personnel funding, and authority to carry out and properly maintain the estuary and coastal habitat restoration activity;

(4) the proposed monitoring plan to ensure that short-term and long-term restoration goals are achieved; a final report given back to the TAC outlining project accomplishments;

(5) the effectiveness of any nonpoint source pollution management efforts upstream and the likelihood of re-impairment;

(6) whether the estuary and coastal habitat restoration activity can be shown to improve or replace habitat losses that benefit fish and wildlife resources;

(7) potential water quality improvements;

(8) potential improvements to or replacements of fish and wildlife habitats for species which are identified as rare or endangered by the Rhode Island Natural History Survey or the federal Endangered Species Act;

(9) the level and extent of collaboration by partners (e.g., municipality, nongovernmental organization, watershed council, federal agency, etc.);

(10) potential direct economic and educational benefits to a community or the state; and

(11) ability of applicant to secure matching funds, whether the funds be NGO, state or federal dollars.

E. Application Process

1. Step 1: Pre-proposals

Send a letter of inquiry:
Megan Higgins, Coastal Policy Analyst
RI Coastal Resources Management Council
Oliver Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, RI 02879

The letter of inquiry shall include: (1) the name of the restoration project, (2) location of the project (town and street address), (3) a budget, indicating amount requested from the program, (4) property ownership information, (5) restoration project manager contact information (phone, email address and mailing address), and (6) organization(s) responsible for the project. All contributing organizations for the project should be listed. If the project is being matched by federal grant or grants, please list grant programs, amounts, and granting agencies.

Request for Pre-proposals
R.I. Coastal and Estuary Habitat Restoration Program and Trust Fund

Background: Rhode Island's coastal habitats provide great benefits to the citizens of the state, serving as nurseries and breeding grounds for fish and shellfish, capturing and filtering pollution, and contributing to the state's economic, community and ecological health. Restoration of seagrass beds, salt marshes, river systems and other coastal habitats has the potential to improve Rhode Island's ecology, quality of life, and public health. The purpose of the R.I. Coastal and Estuary Habitat Restoration Program is twofold: to facilitate design, planning, construction, and monitoring of coastal and estuarine restoration projects by providing grants and technical assistance; and increase awareness about restoration by providing funding for educational outreach opportunities. The program is administered by the R.I. Coastal Resources Management Council with technical support from the R.I. Habitat Restoration Team.

Eligibility: Cities and towns; committees, boards, or commissions charted by a city or town; nonprofit organizations; civic groups; educational institutions; and state agencies. Projects must be located in the state of Rhode Island.

Funding levels: Funding for projects is from an annual account totaling $250,000. Individual awards will generally range from $5,000 to $50,000 per year. Awards will be made for periods of up to two years, pending availability of funds; longer-term projects may reapply in subsequent years.

Match requirements: No match is required; however, proposals that can demonstrate matching funds or in-kind services will have an advantage in the selection process. Applicants are therefore encouraged to detail all federal and non-federal resources contributing toward completion of the project, whether cash or in-kind.

Award Process:

- **October 14, 200X**: Pre-proposals due, outlining potential projects
- November 1, 200X: Program responds to pre-proposals, requests full applications for projects selected for further consideration
- **December 16, 200X**: Full applications due
- January 30, 200X: Notification of awards

To Submit a Pre-Proposal: Send a letter of inquiry *by October 14* to:

Megan Higgins, Coastal Policy Analyst
R.I. Coastal Resources Management Council
Stedman Government Center, Suite 3
4808 Tower Hill Road
Wakefield, RI 02879

Please include: (1) project name; (2) project location (town and street, if any) with map; (3) preliminary budget, indicating amount of request, cash match (if any, indicate

source(s) of funds) and in-kind match (if any); (4) property ownership information, if known; (5) project manager contact information (phone, email address and mailing address), and (6) list of organization(s) involved, with brief description of role of each. Letters of support will not be accepted for pre-proposals, but will be considered with final proposals. Questions about this process may be directed to Megan Higgins, mhiggins@crmc.state.ri.us or (401) 783-3370.

Please mail or hand-deliver pre-proposals. Faxes or emails cannot be accepted.

2. Step 2: Final Proposals

After the technical advisory committee has evaluated the project and the applicant has been notified that the proposal is considered for funding, the applicant should send a detailed application, as described below. Please print the application in 12-point type on one side of the page only. Each page of the application should include a page number, the date, and the project name. The application should not be bound or stapled; paper clips are acceptable. The application should not exceed a total of nine (9) pages (not including letters of support). Page limits for each section are provided below.

The detailed application shall include the following:

(1) Cover Page (1 page maximum)
The application cover page shall include:(1) project name, (2) project location, with map, (3) project budget, including amount requested from this program, (4) property ownership information, (5) restoration project manager contact information (phone, email address and mailing address), (6) organization(s) responsible for the project, and (7) signature of authorized agent of applicant organization. All contributing organizations (both financial contributions as well as in-kind) for the project should be listed. If the project is being matched by federal funds, please specify amount(s), grant program(s), and granting organization(s).

(2) Text (5 pages maximum)
A description of the project shall include the type of restoration initiative that will take place, the historical impact to the site, the natural resources benefited and impacted (target species), pertinent physical, ecological, biological, cultural/historical, geological and survey data, a site map, aerial or conventional photographs if available, preliminary restoration drawings, maps or engineering plans if available, and any additional information that would assist in making an award. (refer to **Section D: Criteria for Project Evaluation** when describing project)

The text should also include proof of property owner permission for the restoration activity to take place. A list of expected permits and the responsible party for obtaining the permits shall be included. (see http://www.csc.noaa.gov/lcr/rhodeisland for a list of necessary permits).

(3) Budget (1 page maximum)
A detailed budget for the project must be included in the application. See page 10 for a project budget template.

(4) Project Schedule (1 page maximum)
Please provide a projected schedule for the project, including design, construction and monitoring. Please include, to the extent possible, project elements that are outside the scope of this proposal.

(5) Monitoring Plan (1 page maximum)

A monitoring plan should be included as appropriate. Monitoring (including reference monitoring) is an allowable use of these funds; generally, however, monitoring should constitute a relatively small portion of overall project funding.
Guides to restoration monitoring include:

(a) "Monitoring Salt Marsh Vegetation"
(b) "Monitoring Nekton in Shallow Estuarine Habitats"
(c) "Long-Term Hydrologic Monitoring Protocol for Coastal Ecosystems"
(d) "Field Methods Manual: US Fish and Wildlife Service (Region 5) salt marsh study"

These protocols may be found on the National Park Service Inventory and Monitoring website: http://www.nature.nps.gov/im/monitor/protocoldb.cfm

(6) Letters of Support (no page limit)
A letter of support from the appropriate state and/or federal resource agency is recommended. Letters from other organizations are encouraged.

(7) Submission of Applications
Please send one signed original and two copies of the application to:
Megan Higgins, Coastal Policy Analyst
RI Coastal Resources Management Council
Oliver Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, RI 02879

Please submit applications by mail or in person; faxed applications will not be accepted.

CHECKLIST FOR APPLICANTS

1. Cover Page (1 page maximum)
   - ☐ project name
   - ☐ project location, with map
   - ☐ project budget, including amount requested from this program
   - ☐ property ownership information
   - ☐ restoration project manager contact information (phone, email address and mailing address)
   - ☐ organization(s) responsible for the project
   - ☐ signature of authorized agent of applicant organization
   - ☐ list of all contributing organizations (both financial contributions as well as in-kind)
   - ☐ list of grant amount(s), grant program(s), and granting organization(s).

2. Narrative (5 pages maximum)
   - ☐ type of restoration initiative that will take place
   - ☐ historical impacts to the site (i.e., type and year of human alteration, if known)
   - ☐ the natural resources benefited and impacted (target species and habitat types)
   - ☐ pertinent physical, ecological, biological, cultural/historical, geological and survey data
   - ☐ a site map
   - ☐ aerial or conventional photographs if available
   - ☐ preliminary restoration drawings, maps or engineering plans if available
   - ☐ any additional information that demonstrates the value of the project

3. Budget (1 page maximum)
   - ☐ budget sheet

4. Project Schedule (1 page maximum)
   - ☐ design schedule
   - ☐ construction schedule
   - ☐ monitoring schedule

5. ☐ Monitoring Plan (1 page maximum)

6. ☐ Letter(s) of Support (no page limit)

PROJECT BUDGET TEMPLATE

(to be used as a guide)

PERSONNEL				
STAFF	**TITLE**	**Hours**	**Rate**	**TOTAL**
FRINGE & PAYROLL TAXES @ 15%				
TOTAL PERSONNEL COSTS				
Consultants				
Outreach and Communications				
TOOL	**DESCRIPTION**	**Number**	**COST**	
Equipment and Supplies				
Travel			0.25	
Boat Usage				
IN-KIND SUPPORT				
CONTRIBUTOR(S) (volunteers, etc.)	**DESCRIPTION**		**C0ST**	
OVERHEAD at 10%	Rent, Utilities, Heat			
TOTAL				
Project Manager Signature:				